

II. Listing of Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-52. (Canceled)

53. (Previously Presented) A prosthetic stabilization system for subcutaneous assembly within a patient's body, the system comprising:

a first pair of bone anchors, each comprising a distal portion and a proximal portion, the proximal portion having a portal extending therethrough;

a second pair of bone anchors, each comprising a distal portion and a proximal portion, the proximal portion having a portal extending therethrough;

a first elongated support structure, sized to extend between a first vertebra and a second vertebra and through the portals in the first pair of bone anchors;

a second elongated support structure, sized to extend between the first vertebra and the second vertebra and through the portals in the second pair of bone anchors; and

an inflatable crossbar extending between the first and second elongated support structures, the crossbar having a deflated insertion configuration and an inflated fixation configuration such that in the inflated fixation configuration the first and second support structures and the crossbar are connected to form an orthopedic fixation structure for supporting at least the first and second vertebrae.

54. (Previously Presented) The system of claim 53, wherein the crossbar comprises an opening for receiving a hardenable media.

55. (Previously Presented) The system of claim 54, wherein the hardenable media received within the crossbar is in a hardened state in the inflated fixation configuration.

56. (Previously Presented) The system of claim 55, further comprising:

a first connector for attaching the crossbar to the first support structure when the crossbar is in the inflated fixation configuration, the connector comprising a first aperture for receiving the crossbar and a second aperture for receiving the first support structure.

57. (Previously Presented) The system of claim 56, wherein a first axis extends through and is substantially aligned with the first aperture of the first connector; and

wherein a second axis extends through and is substantially aligned with the second aperture of the first connector, the second axis being generally perpendicular to the first axis.

58. (Previously Presented) The system of claim 56, further comprising:

a second connector for attaching the crossbar to the second support structure when the crossbar is in the inflated fixation configuration, the second connector comprising a third aperture for receiving the crossbar and a fourth aperture for receiving the second support structure;

wherein a third axis extends through and is substantially aligned with the third aperture of the second connector; and

wherein a fourth axis extends through and is substantially aligned with the fourth aperture of the second connector, the fourth axis being generally perpendicular to the third axis.

59. (Previously Presented) The system of claim 58, wherein the crossbar has an inflated diameter greater than the diameters of the first and third apertures of the first and second connectors in the inflated fixation configuration.

60. (Previously Presented) The system of claim 53, wherein the crossbar comprises a tubular sleeve and an inflatable member disposed within the tubular sleeve, the inflatable member including an opening for receiving a hardenable media for inflating the crossbar to the inflated fixation configuration.

61. (Previously Presented) The system of claim 60, wherein the tubular sleeve includes plurality of circumferentially extending slots such that the tubular sleeve is flexible.

62. (Previously Presented) The system of claim 60, wherein the crossbar comprises a first opening for receiving the first support structure and a second opening spaced from the first opening for receiving the second support structure.

63. (Previously Presented) A prosthetic stabilization system for subcutaneous assembly within a patient's body, the system comprising:

a first spinal stabilization member comprising an inflatable balloon with a proximal end portion, a distal end portion, and a flexible wall defining an interior cavity extending between the proximal and distal end portions, the first stabilization member sized to extend between a first vertebra and a second vertebra;

a second spinal stabilization member comprising an inflatable balloon with a proximal end portion, a distal end portion, and a flexible wall defining an interior cavity extending between the proximal and distal end portions, the second stabilization member sized to extend between the first and second vertebrae;

a crossbar attachable to the first and second spinal stabilization members, the crossbar comprising an inflatable balloon with a proximal end portion, a distal end portion, and a flexible wall defining an interior cavity extending between the proximal and distal end portions, the crossbar having a first deflated state with a first diameter and a second inflated state with a second diameter, the second diameter being greater than the first diameter;

a first connector for attaching the crossbar to the first stabilization member, the first connector comprising a first aperture having a third diameter for receiving the crossbar and a second aperture having a fourth diameter for receiving the first stabilization member, wherein the third diameter of the first aperture is less than the second diameter of the crossbar; and

a second connector for attaching the crossbar to the second stabilization member, the second connector comprising a third aperture having a fifth diameter for receiving the crossbar and a fourth aperture having a sixth diameter for receiving the second stabilization member, wherein the fifth diameter of the third aperture is less than the second diameter of the crossbar;

wherein the inflatable crossbar is elongated to extend through the first aperture of the first connector and the third aperture of the third connector in its first deflated state such that inflation of the crossbar to the second inflated state while extending through the first and third apertures secures the crossbar to the first and second connectors.

64. (Previously Presented) The system of claim 63, wherein the second aperture of the first connector extends substantially perpendicular to the first aperture of the first connector.

65. (Previously Presented) The system of claim 64, wherein the fourth aperture of the second connector extends substantially perpendicular to the third aperture of the second connector.

66. (Previously Presented) The system of claim 63, wherein the balloons of first and second spinal stabilization members have a deflated state with a deflated diameter and an inflated state with an inflated diameter, the deflated diameter being less than the fourth and sixth diameters of the first and second connectors, and the inflated diameter being greater than the fourth and sixth diameters of the first and second connectors.

67. (Previously Presented) The system of claim 66, further comprising a first pair of bone anchors for securing the first stabilization member to the first and second vertebra, each of the first pair of bone anchors comprising a distal portion and an opposing proximal portion, the proximal portion comprising a closed head with a portal extending therethrough for receiving the first stabilization member.

68. (Previously Presented) The system of claim 67, wherein the portal has a diameter greater than the deflated diameter of the first stabilization member and less than the inflated diameter of the first stabilization member.

69-72. (Canceled)